

Independent Claims 1, 9, and 16

The invention is directed to an electrical connector that can receive a mating connector. Further, a temperature sensor on the electrical connector is positioned to detect a surface temperature of the mating connector. In this manner, the surface temperature of the mating connector is detected when the mating connector is inserted in the electrical connector, while still allowing removal of the mating connector from the electrical connector.

The cited references do not disclose or suggest all of the features of the invention as recited by the claims, as represented by claim 1 which recites “*a temperature sensor on said electrical connector positioned to detect a surface temperature of the mating connector when said mating connector is received in said electrical connector, said temperature sensor positioned to allow insertion and removal of said mating connector to and from said electrical connector.*”

Kimura discloses a card connector for receiving a card but does not disclose a temperature sensor. The examiner concedes that Kimura lacks the claimed temperature sensor for detection of the surface temperature of the mating connector and therefore seeks to rely on Przilas.

Przilas includes a temperature sensor 116 that is used to control the internal temperature of an enclosure and therefore, senses the internal temperature of the enclosure. Przilas, however, does not disclose a temperature sensor that is positioned to detect a surface temperature of the mating connector, as recited by the claims.

The examiner reads the enclosure 100 of Przilas to be an electrical connector. Enclosure 100, however, is not an electrical connector; rather, enclosure 100 is an environmental chamber that can be temperature controlled.

The examiner also asserts that temperature sensor 116 of Przilas is positioned detect a temperature of electronic card 32. Temperature sensor 116, however, does not detect a *surface temperature* of electronic card 32; rather, temperature sensor 116 detects the temperature *within*

closed compartment 22 (Przilas at col. 6, lines 57-59). Further, the temperature within closed compartment 22 may be very different from that of the surface of electronic card 32. As can be seen in Figure 3a, temperature sensor 116 is located distal from electronic card 32 and as such, the temperature of the surface of electronic card 32 may be very different from the temperature sensed by temperature sensor 116. That is, there may be a significant steady-state difference between the surface temperature of the electronic card 32 and the temperature sensed by temperature sensor 116. Moreover, there may be surface temperature changes in electronic card 32 that are never sensed by temperature sensor 116 because it is located very distal from electronic card 32.

The examiner further asserts that temperature sensor 116 *indirectly* senses the temperature of the electronic card 32. Temperature sensor 116, however, is not proximate enough to electronic card 32 to sense the *surface temperature* of electronic card 32. Accordingly, neither Kimura nor Przilas disclose or suggest a temperature sensor *positioned to detect a surface temperature of the mating connector and positioned to allow insertion and removal of the mating connector to and from the electrical connector*.

The examiner further asserts that the applicant is attacking the references individually. Applicant is arguing the neither reference discloses or suggests the limitation of *a temperature sensor positioned to detect a surface temperature of the mating connector and positioned to allow insertion and removal of the mating connector to and from the electrical connector*. Moreover, assuming arguendo that there is some motivation or suggestion to combine the references, the combination of Przilas and Kimura would result in a temperature sensor positioned to detect the temperature of the cavity of an electrical connector, not the surface temperature of a mating connector.

Therefore, neither of the cited references disclose or suggest the features of independent claims 1, 9, or 16, or any claims depending therefrom including claims 2-8, 10-15, and 16-19 and therefore they are also patentable, at least by reason of their dependency. Moreover, the

combination of the cited references (assuming *arguendo* that such combination is suggested) does not disclose or suggest the features of the independent claims (or any claims depending therefrom). Thus, claims 1-19 are patentable over the cited references and applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-19 under 35 U.S.C. § 103(a).

Dependent Claim 4

Claim 4 recites a *temperature sensor extending into an aperture*. Neither Kimura nor Przilas disclose or suggest a temperature sensor extending into an aperture. Kimura discloses an aperture, but does not disclose or suggest a temperature sensor extending into the aperture. Przilas discloses a temperature sensor but does not disclose a temperature sensor extending into an aperture. Therefore, neither Kimura or Przilas disclose or suggest a temperature sensor extending into an aperture, as recited by the claim.

The examiner refers only to Kimura in rejecting claim 4, however, the examiner has noted in the office action that Kimura does not disclose a temperature sensor (office action at page 2, line 19). Therefore, Kimura cannot by itself disclose or suggest a temperature sensor extending into an aperture, as recited by the claim. Further, the examiner has not yet made a *prima facie* case that Przilas discloses or suggests a temperature sensor extending into an aperture, nor does Przilas disclose or suggest a temperature sensor extending into an aperture, as recited by the claim.

Therefore, neither of the cited references do not disclose or suggest the features of dependent claim 4. Further, the combination of the cited references (assuming *arguendo* that such combination is suggested) does not disclose or suggest the features of claim 4. Thus, claim 4 is patentable over the cited references for the reasons set forth above and applicant respectfully requests reconsideration and withdrawal of the rejection of claim 4 under 35 U.S.C. § 103(a).

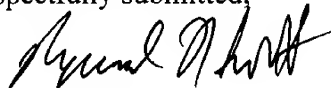
Newly Added Claims

Claims 26-33 have been newly added to further define the invention. No new matter has been added. The amendments find support in the specification as originally filed at page 1, line 26, page 10, lines 1-2, page 10, lines 7-8, and Figure 1.

CONCLUSION

In view of the foregoing amendments and remarks, applicant respectfully submits that the present application is in condition for allowance. Reconsideration of the application and an early notice of allowance are respectfully requested. In the event that the examiner cannot allow the present application for any reason, the examiner is encouraged to contact the undersigned attorney, Raymond N. Scott Jr. at (215) 564-8951, to discuss resolution of any remaining issues. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claims 1, 9, 16, and 17 have been **amended** as follows.

1. (Three Times Amended) An electrical connector system, comprising:
an electrical connector adapted to receive a mating connector; and
a temperature sensor on said electrical connector positioned to detect a surface temperature of the mating connector when said mating connector is received in said electrical connector and positioned to allow insertion and removal of said mating connector to and from said electrical connector.
9. (Three Times Amended) An electrical connector for an electronic card, comprising:
a header;
a frame associated with said header to guide the electronic card into engagement with said header; and
a temperature sensor [associated with said frame] positioned to detect a surface temperature of the electronic card when said electronic card is engaged in said header, said temperature sensor and positioned to allow engagement and removal of said electronic card with and from said header.
16. (Twice Amended) An electrical connector system for an electronic card, comprising:
an electrical connector;
a frame associated with said electrical connector;
a temperature sensor [associated with said frame] positioned to detect a surface temperature of the mating connector when said mating connector is inserted in said electrical

connector, said temperature sensor positioned to allow insertion and removal of said mating connector with and from said electrical connector; and

a transition board, said electrical connector and said temperature sensor connected to said transition board.

17. (Amended) The electrical connector system as recited in claim 16, wherein said connector and said temperature sensor are discretely connected to said transition board.

Claims 26-33 have been **newly added** as follows.

26. (Newly Added) The electrical connector system as recited in claim 1, wherein the temperature sensor is positioned to directly detect the surface temperature of the mating connector.

27. (Newly Added) The electrical connector system as recited in claim 1, wherein the temperature sensor is positioned immediately adjacent the mating connector to detect the surface temperature of the mating connector.

28. (Newly Added) The electrical connector for an electronic card as recited in claim 9, wherein the temperature sensor is positioned to directly detect the surface temperature of the electronic card.

29. (Newly Added) The electrical connector for an electronic card as recited in claim 9, wherein the temperature sensor is positioned immediately adjacent the electronic card to detect the surface temperature of the electronic card.

30. (Newly Added) The electrical connector system for an electronic card as recited in claim 16, wherein the temperature sensor is positioned to directly detect the surface temperature of the mating connector.

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31. (Newly Added) The electrical connector system for an electronic card as recited in claim 16, wherein the temperature sensor is positioned immediately adjacent the mating connector to detect the surface temperature of the mating connector.

32. (Newly Added) An electrical connector system, comprising:

an electrical connector adapted to receive a mating connector; and

a temperature sensor on said electrical connector positioned to directly detect a temperature of the mating connector when said mating connector is received in said electrical connector and positioned to allow insertion and removal of said mating connector to and from said electrical connector.

33. (Newly Added) An electrical connector system, comprising:

an electrical connector adapted to receive a mating connector; and

a temperature sensor on said electrical connector positioned immediately adjacent the mating connector to detect a temperature of the mating connector when said mating connector is received in said electrical connector and positioned to allow insertion and removal of said mating connector to and from said electrical connector.